REMARKS

Claims 1 and 2 are amended in order to correct errors of a typographical nature. The Applicants respectfully submit that no new matter is entered. It is believed that this amendment is fully responsive to the present Office Action.

The present invention is an optical connector socket having a body with a socket-side optical device installed therein and an insertion section to which a connected optical connector plug is inserted. A cover covers the body and has an opening section communicating with the insertion section. A shutter is arranged between the body and the cover, for opening and closing the opening section of the cover. The shutter opens inwardly into the body and an elastic member always elastically urges the shutter in a closing direction. The opening section is set to have an outside dimension greater than the outside dimension of the optical connector plug inserted into the cover and smaller than the outside dimension of the shutter.

Claims 1 and 5 are rejected under 35 USC §103(a) as being unpatentable over Takaoka et al. (U.S. Patent No. 6,481,902). Reconsideration and removal of this rejection is respectfully requested.

It is alleged in the Office Action that Takaoka et al. discloses an optical connector socket comprising a body (10a) having a socket-side optical device (14) installed therein and an insertion section to which a connected optical connector plug (13a) is inserted, a cover (10b) that is covered on the body and has an opening section communicating with the insertion section, a shutter (11) arranged between the body and the cover for opening and closing the opening section of the cover, the shutter opening

inwardly into the body, and an elastic member (15) that always elastically urges the shutter in a closing direction, wherein the opening section is set to have an outside dimension greater than the outside dimension of the optical connector plug inserted to the cover.

It is further alleged that Takaoka et al. does not explicitly state that the opening section of the cover is set to have an outside dimension smaller than the outside dimension of the shutter, but that Takaoka et al. teaches that using the shutter protects the device from dust and other foreign objects, no apertures are left when the shutter is closed, and that having the shutter that is larger than the opening ensures that no apertures are left when the shutter is closed. Thus, it is alleged, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the opening section that is smaller than the shutter in Takaoka et al. to provide improved protection from any foreign objects.

It is respectfully submitted that the outside dimension of the opening section of cover (10b) of Takaoka et al. is <u>not</u> smaller than the outside dimension of the shutter (11). This submittal is based on Figs. 3(a) and 4(b) of the drawings of Takaoka et al. In Fig. 3(a), near a top/right corner of the drawing, shutter (11) is shown as being substantially the same dimension as contacting cover 10(b) and just contacting cover 10(b). In Fig. 4(b), at the far right edge of the drawing, shutter (11) is shown as having substantially the same outside dimension as cover 10(b) and just contacting cover 10(b).

If the dimension of the opening section of the cover of Takaoka et al. were smaller than the shutter outside dimension, as presently claimed, the shutter would overlap a portion of the cover. Such overlapping is not shown and is not described in the specification of Takaoka et al.

It is mentioned in the Office Action that Takaoka et al. does not explicitly state that the opening section of the cover is set to have an outside dimension smaller than the outside dimension of the shutter. It is alleged that since Takaoka et al. teaches that using the shutter protects the device from dust and other foreign objects and that no apertures are left when the shutter is closed, then the opening section of the cover must be smaller than the shutter outside dimension. However, such relationship in size is not necessarily required to achieve the stated conditions. It is respectfully submitted that having the opening section of the cover being substantially the same size as the outside dimension of the shutter, as described above when referring to Figs. 3(a) and 4(b), would achieve the stated conditions.

In view of the above remarks, removal of this rejection is respectfully requested.

Claims 2-4 are rejected under 35 USC §103(a) as being unpatentable over Takaoka et al. and further in view of Seto et al. (U.S. Patent No. 6,267,513). Reconsideration and removal of this rejection is respectfully requested.

It is alleged in the Office Action that Takaoka et al. teaches the claimed connector socket, as discussed above, but does not explicitly state that the guiding projection becomes narrower toward the backside of the insertion section. It is further alleged that Seto et al. teaches an optical connector having a plug, a receptacle and a tapered guide projection (25) with a locking recess section (30) that engages with a locking convex section (15) provided on an outer surface of the plug (Fig. 11). Thus, it is alleged that it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the tapered guide projection of Seto et al. in Takaoka et al. to provide optimum optical coupling structure.

Takaoka et al. is discussed above. Regarding Seto et al., it appears as though the connector disclosed by Seto et al. is being mischaracterized.

The present claimed invention includes a guide projection (190), which becomes narrower toward a backside of the insertion section (110), for guiding the connector plug (B). Seto et al. does not describe such a feature. In the connector of Seto et al., plug (2), made up of front portion (13) and cover (6), is inserted into box-like compartment (22). The plug is not guided by the alleged tapered guide projection (25), as presently claimed, because alleged tapered guide projection (25), as best viewed in Fig. 11, is positioned above compartment (22) and therefore does not bear on plug (2) in order to guide it. As shown in Fig. 9, component (25) is merely a tab-like projection, extending over only a limited central portion of the width of the compartment (22), for engaging with triangular ridge-like latch projection 15 (see Fig. 11). The plug (2) does not need to be guided by a narrowing or tapered guide projection, as the plug is being guided by the box-like compartment (22) which is substantially the same size as the plug (2). When referring to Fig. 11 the portion of box-like compartment (22), which is not shown in section, and which is above plug (2), must be considered. Seto et al. does not describe any guiding function in the specification. Figure 11 clearly shows that the alleged tapered surface (27) of alleged guide projection (25) does not come into contact with the top horizontal surface of plug (2). A triangular shaped gap, located under tapered surface (27), separates the plug (2) from the receptacle (3), therefore no guiding can possibly take place.

Additionally, such alleged tapered guide projection (25) does not become narrower toward the backside of the insertion section. The alleged guide projection (25) is near a frontside of the insertion section.

In view of the above remarks, removal of this rejection is respectfully requested.

It is believed that Claims 1-5 are patentable over the references cited and are now in condition for allowance. Allowance of Claims 1-5 is respectfully requested.

If there are any issues of a minor nature remaining, the Examiner is urged to contact Applicants' attorney, the undersigned, at Area Code (202) 659-2930.

In the event that any fees are due in connection with this paper, please charge our Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP

William G. Kratz, Jr.
Attorney for Applicants
Reg. No. 22,631

WGK/nrp

Atty. Docket No. 030731
Suite 1000,1725 K Street, N.W.
Washington, D.C. 20006
Tel: (202) 659-2930
Fax: (202) 887-0357

23850
PATENT TRADEMARK OFFICE